Mark Pearce. *Rethinking the North Italian Early Neolithic* (Specialist Studies on Italy. London: Accordia Research Institute, University of London, 2013, 245pp., 146 figs., 157 tables, pbk, ISBN 978-1-873415-44-3)

Instead of echoing Julian Thomas' (1991) influential *Rethinking the Neolithic*, a more accurate title for this book might have been, 'A Radiocarbon Chronology for the North Italian Early Neolithic', since it proposes a more secure chronology for that region and period, based on a large corpus of radiocarbon determinations and on Bayesian statistical modelling. The work of chronology-building dominates, although in the final pages Mark Pearce seeks to demonstrate how this revised chronology might contribute to our understanding of the transition to agriculture and to related Neolithic lifeways in the central Mediterranean region.

The book is part of the growing series of 'Specialist Studies on Italy' published by Accordia, a research institute of the University of London. It is very well produced, with a clear typeface, abundant figures and tables, and no typographic errors, even though the header accidentally shifts position after page 158 from the outside to the inside of the pages, making the later page numbers and chapter titles difficult to spot. The text is also very clearly expressed, with an easy-to-read style that should enhance the accessibility of the book to scholars for whom English is not their mother tongue, even if native English speakers may find this style rather laboured. Equally helpfully, radiocarbon determinations, their variable accuracy, and related publication conventions are all explained clearly. The book is also provided with a well-packaged bibliography and a useful index of sites mentioned in the text.

Pearce contributes successfully to replacing previous culture-historical chronologies for the north Italian Early Neolithic, established in the 1940s and 80s, which were based, first, on the cave sequence of Arene Candide, and, later, on radiocarbon dates. Moving beyond a first attempt to establish a radiocarbon chronology for Italian prehistory (Skeates & Whitehouse, 1994), Pearce allies his work to 'the third radiocarbon revolution' (p. 15), comprising the application of Bayesian statistical analyses to groups of radiocarbon determinations — the first revolution being the initial application of radiocarbon dating to archaeology, and the second the tree-ring calibration of radiocarbon determinations. In this, he has been justifiably inspired by

Whittle et al.'s (2011) re-dating of the Early Neolithic enclosures of southern Britain and Ireland. The result for Italy is not exactly revolutionary, since Pearce's Bayesian modelling sharpens up (rather than replaces) existing radiocarbon chronologies. For example, my 20-year-old model (Skeates, 1994) of the radiocarbon chronology of coastal Impressed Ware in the western Adriatic region still holds (p. 203), but Pearce's model of the Early Neolithic spread northwards is more nuanced. Nevertheless, Pearce's study is the best undertaken so far within the field of radiocarbon dating and Italian prehistory: setting the standard for others to follow.

The core of the book is composed of site-by-site chronological modelling for two periods (the Mesolithic and Early Neolithic) and three regions (the Tyrrhenian and Ligurian seas area, the Adriatic Sea area, and the Po Valley), accompanied by a wealth of clearly presented figures and tables of data and models, and clear discussions of these. This approach and structure make much of the book worthy but dull, and most readers will not want to plough their way through all of the details. Thankfully Pearce disperses useful summaries throughout the volume, although it would have been helpful to signpost these in the Contents page. A chart or isochron map summarizing the revised chronology would also have significantly enhanced the brief conclusions chapter.

The Italian corpus of radiocarbon determinations is of variable quality. Pearce has therefore worked painstakingly to track down final — as opposed to preliminary — laboratory determinations, the latter of which were sometimes published prematurely by excavators and thereafter confusingly circulated in the wider archaeological literature (e.g. Table 2.1 on p. 18, clarifying La Jolla radiocarbon laboratory's determinations for Arene Candide). Pearce also identifies ambiguities and errors in other published information (e.g. incorrectly quoted standard deviations), and highlights problems with the archaeological contexts of some samples (e.g. those that produced particularly early Early Neolithic dates from Basi and Curacchiaghju in southern Corsica). He also weeds out 'junk' determinations according to sound criteria (e.g. a determination made on a bulk sample of charcoal from combined stratigraphic spits (4a–c) at the Late Mesolithic site of Isola Santa in Tuscany, which produced an anomalously early determination compared to two other samples from separate spits). But despite this outstanding critical evaluation of the data, Pearce

continues to use determinations with high standard deviations, for which the application of Bayesian statistical modelling sometimes seems like overkill (e.g. three determinations for Mesolithic Abri de Strette in Corsica with standard deviations of between ±300 and 430 years, detailed and modelled in Tables 3.12–13 on p. 37). Indeed, perhaps the key lesson to be taken from this whole exercise is just how problematic the Italian corpus of radiocarbon determinations is. ('Unfortunately' is a word used recurrently throughout Pearce's text.) And so, in order to achieve a second, let alone a third, radiocarbon revolution in Italy, we may need to start over again. As Pearce acknowledges in his concluding remarks, 'We need large series of samples in good stratigraphic relationships, determined by AMS' (p. 220).

Despite Pearce's admission of a research bias towards northern Italy (p. 10), he recognises that the Neolithization process in this region was tied to developments in neighbouring regions. As a consequence, one of his key achievements is to set the chronology of the north Italian Early Neolithic in a wider central Mediterranean context, by also revising the chronologies of regions to the south flanking the Adriatic and Tyrrhenian seas, right down to Corfu and Sicily. But why he excludes the south-east Italian region of Apulia (including the early and densely settled Tavoliere plain) is baffling, given the prime importance of this region in the transition to agriculture in the Adriatic and central Mediterranean regions. This lack is highlighted by Figure 4.6 (on p. 94): a map labelled 'Sites in the Adriatic', which misleadingly leaves out the radiocarbon dated Early Neolithic sites of northern Apulia. (A more appropriate caption would have been 'Sites in the Central Adriatic'.) Indeed, by the simple inclusion of Apulia and the Maltese Islands, Pearce could have completed his valuable analysis on a scale much more appropriate to the geographically extensive cultural processes under consideration.

It is worth summarizing Pearce's chronological model for the spread of the Neolithic in northern Italy, which — although not exactly precise — is the most reliable currently available. In north-west Italy, Early Neolithic maritime pioneer colonists using Impressed Ware appeared in western Liguria from at least 5630 cal BC, and perhaps as early as the first century of the sixth millennium, arriving from the South via the Tyrhennian and Ligurian seas. In north-west Italy, Neolithic migrants appeared in Friuli a little later, from the mid sixth millennium, with likely origins to

the South-east in the eastern Adriatic (and perhaps even closer at the head of the Adriatic, where key sites may be lost to us by Holocene sea-level rise). In between, a variety of regional Neolithic groups emerged in the Po Valley, southern Piedmont, and adjacent mountain areas somewhat later, between the second half of the sixth millennium and the first half of the fifth millennium, perhaps representing a mix of population movement and acculturation of indigenous hunter-gatherer groups. To the South-east, in Romagna, Adriatic Impressed Ware also appeared in the second half of the sixth millennium cal BC, introduced by agricultural colonists spreading up from the South along the western Adriatic coast.

When it comes to interpretations of his radiocarbon chronology, Pearce makes some interesting points. For example, he offers the plausible suggestion that, in Tuscany, despite an overlap in the radiocarbon chronology, Late Mesolithic Castelnovian hunter-gatherers at Lama Lite II, situated on the Apennine watershed, had no contact with Early Neolithic farming groups at Pian di Cerreto, in the Serchio basin — the two sites being located in different geographical zones, separated by the main ridge of the Apennine mountains (p. 159). Pearce also highlights the very early dates (in the second half of the seventh millennium) for the earliest Neolithic in the Fucino lake basin in inland Abruzzo, notably for the open sites of Rio Tana and Colle Santo Stefano (and also, less reliably, for Grotta Continenza). But he offers no explanation of what, to my mind, looks increasingly like a coherent group of radiocarbon dates for the elusive Mesolithic-Neolithic transition in central Italy, as opposed to a more fully established Early Neolithic (Skeates, 2003: 171). Pearce provides slightly more extended discussion of the question, 'Why is the Neolithic attested so early in Liguria?' (pp. 197–99) (in the early sixth millennium). But his answer seems incomplete and slightly contradictory: referring geographically to the availability of caves and lithic resources and the visibility of the high white sand dune below the cave of Arene Candide; and referring socially, one the one hand, to the pre-existence of Mesolithic maritime networks in the Tyrrhenian and Ligurian seas, and, on the other hand, to the lack of Mesolithic people in western Liguria. Likewise, mechanisms for the spread of the Neolithic in Liguria are explained in fairly familiar terms of a combination of intrusive groups spreading via maritime 'leapfrog' colonization (e.g. the Impressed Ware users of western Liguria) and (slightly later) acculturated hunter-gatherers (e.g. at the site of Pianaccia di Suvero in eastern

Liguria). Pearce also discusses the character of Early Neolithic subsistence economies in northern Italy, confirming the practice of agriculture around sites such as Arene Candide and Sammardenchia, but confusing the issue by insisting on the relevance of the term 'full Neolithic', and failing to link this discussion to his chronological model. Where, then, is the 'rethinking' promised by the book's title? On reflection, this book gives us a lot on 'when', but much less on 'how' and 'why' transitions to Neolithic lifeways took place in Italy.

Overall, this book will be primarily of interest to the relatively small community of specialists interested in the Italian Neolithic, but it is also a welcome addition to the literature on the radiocarbon chronology for central Mediterranean prehistory. It should also certainly be consulted by scholars exploring larger-scale patterns and processes relating to the spread of agriculture in the Mediterranean region.

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